Cyber Alert School Safety

Cyber Alert School Safety GIS

2019 Michigan's Statewide Interoperable Communications Training Conference

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C.A.S.S.
CYBER ALERT SCHOOL SAFETY

DATA**capable**™

Cyber Alert School Safety

esri®

School Safety, Event Reporting, and Map-Based Software Solutions

PROACTIVE COMMUNICATION,

SENTIMENT ANALYSIS AND MACHINE-LEARNING

FOR DATA-DRIVEN DECISION MAKING

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State of Michigan School Safety Grants

Overview

The safety and well-being of students and staff at pre-K to12 schools is critically important. In a Federal Bureau of Investigation study of active shooter incidents from 2000 to 2017, 15 percent of incidents took place in a pre-K to 12 school building. Therefore, it is critical for communities to foster a safe and secure environment within their school buildings.

Program Purpose

The purpose of this grant program is to award funds for the purchase of technology and/or equipment and to conduct assessments which will improve the security of school buildings, as well as the safety of students and school staff.

Program Goal

The goal of this grant program is to create a safer school environment through equipment and technology enhancements.

State of Michigan School Safety Grants

Program Areas

Based on requirements within the funding appropriation, MSP GCSD has created two program areas for the FY 2018 CSSGP. Applicants must select either Program Area 1 or Program Area 2 on the application form. Applicants may only apply for one program area.

Program Area 1

Applications are limited to $25,000 per application for individual schools, and $250,000 for school districts or intermediate school districts. Eligible applicants are allowed to submit only one application. Funding will not be awarded to a school building more than once. Example: An individual school submits an application for its building, and a school district submits an application that also includes that same building. In this situation, that individual school building cannot receive two funding awards. If more than one application is submitted for the same building, the application submitted closest to the application deadline will be the one considered for funding.

State of Michigan School Safety Grants

Program Areas

Based on requirements within the funding appropriation, MSP GCSD has created two program areas for the FY 2018 CSSGP. Applicants must select either Program Area 1 or Program Area 2 on the application form. Applicants may only apply for one program area.

Program Area 2

Applications are limited to an award of $1 million per application (please note that a project must be at least $1,333,333 in order to receive a $1 million grant award) for all applicants. Applicants are required to provide a 25 percent cash match. Eligible applicants are allowed to submit one application. Funding will not be awarded to a school building more than once. Example: An individual school submits an application for its building, and a school district submits an application that also includes that same building. In this situation, that individual school building cannot receive two funding awards. If more than one application is submitted for the same building, the application submitted closest to the application deadline will be the one considered for funding.

State of Michigan School Safety Grants – EOP Required

Emergency Operation Plans Requirements

The EOP must cover all of the topics listed below, which are in the EOP Template released by the MSP in 2014, with the All-Hazards Emergency Operations Planning Guidance for Schools 2014. The format of your EOP does not have to be the same as what was developed by the state but must include each topic.

Initial Response – e.g. Notification Procedures

Assignment of Responsibilities

Direction and Control – e.g. Crisis Response Team Post, Lines of Succession, ICS

Coordination Communications – e.g. External and Internal

Administration, Finance, and Logistics – e.g. Administrative Controls, Recordkeeping, Vital Record Preservation

Plan Development, Maintenance, and Distribution – e.g. Approval, Dissemination, Change Records

Training and Exercising the Plan

Emergency Contact Rosters

Class Rosters and Schedules

School Maps and Floor Plans

Specific Response Actions

Hazard-Specific Emergency Procedures

Continuity of Operations Plan

Incident Command Job Action Sheets

Resource Inventory

Go-Kit and Emergency Supplies Checklists

Memorandums of Agreement/Understanding

Law Enforcement Command Posts

Emergency Utility Shut-Off Procedures

Cardiac Emergency Response Plan

DPSCD School Safety Issues – Threats and Fights

hellll no!!! y'all play too much

FWD:Cass Tech shootout!! Don't come to school this Monday, January 25th, 2016!! I am sick of all of this shit talking. Therefore, tomorrow will be our first and final Cass Tech shootout! To save a life, forward this message to all of your friends before tomorrow. Anyone who enters the building tomorrow is a dead man walking. Be very afraid. Have a blessed evening because it may be your last!

Bag checks f████ up my plans ..... I got something for y'all Tomorrow tho ... I promise 👐 might even be after school ... Or Friday Grimm bet not come rest of the week 💯 I'm not posting no more 👌

I'm done with oak park bible I am 💯 I'm tired of everybody pushing me around f██k the teachers f██k em all I'm bouta shoot that bitch up don't go to school the rest of the week it's over bro I swear to god ✌️ 😒 I'm coming for Mr Grimm 💯 💯

< Messages (305) Group MMS   Details

To: M████

Marcus Cutler

ATTENTION ALL SOUTHEASTERN HIGH SCHOOL STUDENTS DO NOT I REPEAT DO NOT ATTEND SCHOOL ON FEB 21, 2016 I WILL BE BRINGING A GUN AND FOR YOUR SAFETY I ADVISE YOU ALL TO STAY HOME. NO ONE WILL KNOW HOW I WILL GET THE GUN IN THE BUILDING JUST KNOW A COUPLE PEOPLE WILL BE DEAD TOMORROW
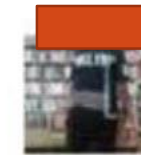
A████████
Imma shoot up shoot my school tomorrow
Just now · Like · Reply
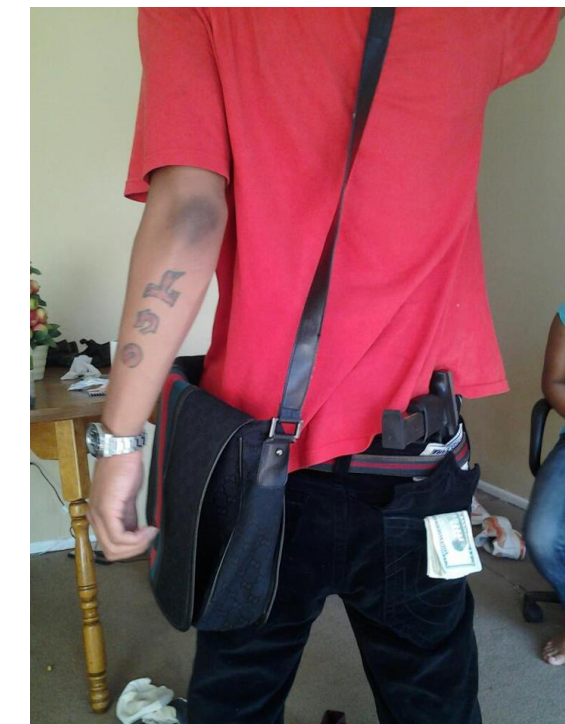
DPSCD School Safety Issues – Threats and Fights

DPSCD – Resource Management with GIS
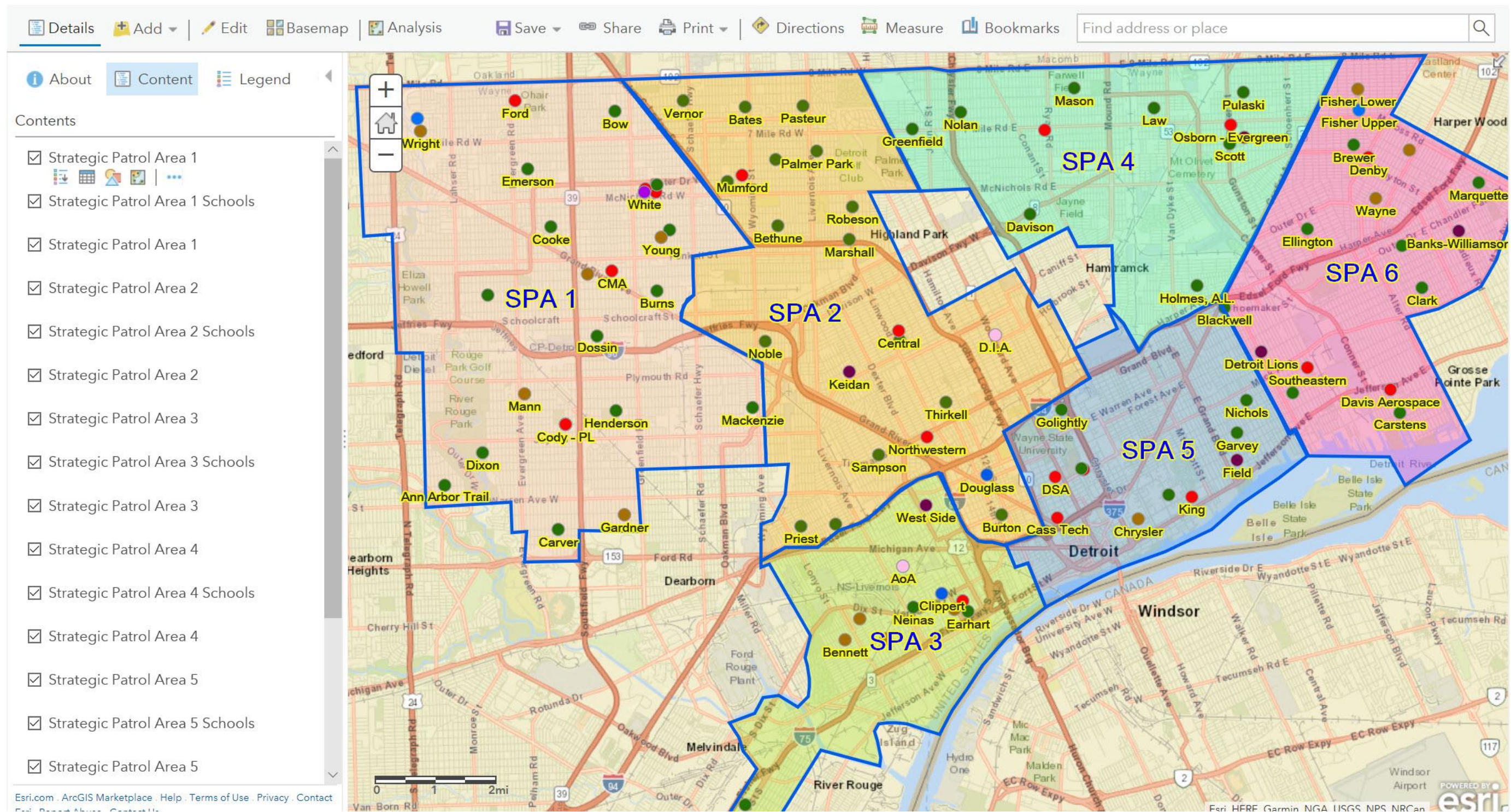
DPSCD — Esri Available Social Media App
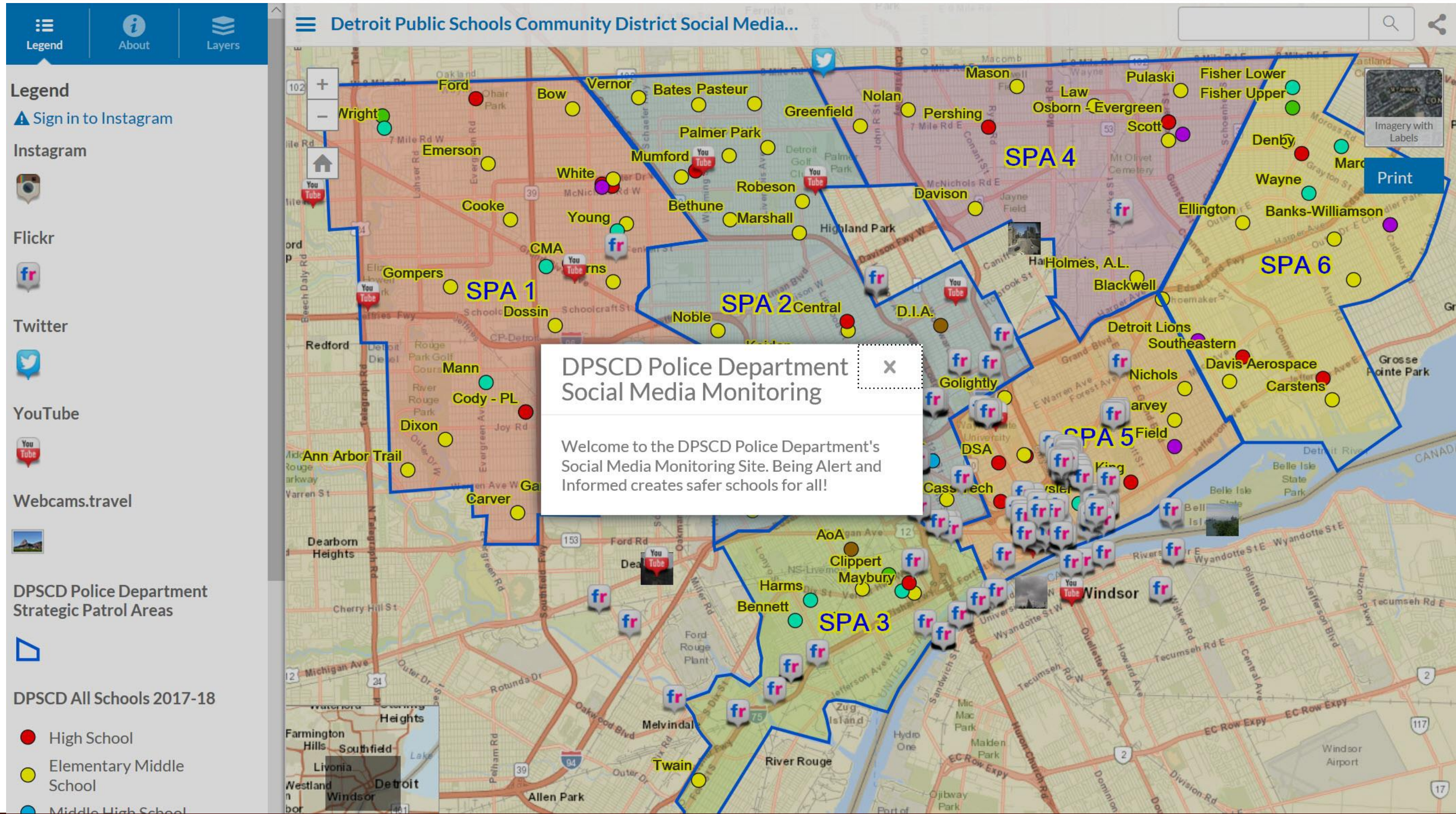
School Safety Initiative Overview

INSPIRE DATA DRIVEN ACTION

WITH MACHINE LEARNING EXPERTISE THAT ALIGNS OPERATIONAL
DATA WITH CUSTOMER ENGAGEMENT OPPORTUNITIES

SCHOOL SAFETY INITIATIVE OVERVIEW

Real-Time Event Detection:
every second counts in an emergency
situation.

Real-Time Event Notification:
effective communications when time
sensitive data must be delivered.

Real-Time Event Mapping:
public and customers need to know when
and where things are happening.

DATA CONSIDERATIONS

Each social media network provider has specific terms for their API's (if the API exists). The terms define what can and cannot be done with data. For example, Twitter has specific developer terms. These can be reviewed at:
https://developer.twitter.com/en/developer-terms/more-on-restricted-use-cases.

The DataCapable social media module cannot be used for surveillance, spying, or any use case that violates governing laws. DataCapable complies with our partners data terms including approvals for new use cases and clients leveraging these use cases. In some cases, our clients are only approved for event detection (location and event type).

Event detection (Twitter)	Event detection (sms)	Event detection (E)
Event detection (YouTube)	No public API (Nextdoor)	Event detection (National Weather Service)
Connected account required (Facebook)	No public API (Snapchat)	Not applicable (Pinterest)
Connected account required (Instagram)	Event detection (Tumblr)	Event detection (Reddit)

MODULES AVAILABLE NOW

For each module, data can be anonymized, meaning no personally identifiable information by the user reporting the event will be revealed.

Real-time Data

Data sources include:
- **Social Media**
  *(*only approved use cases allowed)*
- **News & Media**
- **Weather Data**
- **Weather Spotters**
- **Smart Devices**
- **Map-Based Reports**
  *(*requires Event Mapping)*
- **SMS and MMS**

API and Esri Integrations Available.

Event Detection

Data sources mirror steaming data module. This data is filtered through our proprietary event detection algorithms.

Notifications

Notification Types
- Topic based
- Influencer based
- Threshold based
- Event Detection

Alerts delivered by text message and email.

Alerts can be integrated with existing systems for display

Event Mapping

- **Automatically populated** from sensors, IoT devices, integrations with existing systems.
- **Manually populated** with community events, construction, wildfires.

EVENT DETECTION & VALIDATION

- ☑ US Wildfires - Wildfires
- ☑ US StructureFire - Structure Fires
- ☑ US PowerOutages - Power Outages
- ☑ US Landslides - Landslides
- ☑ US Flooding - Flooding
- ☑ US ActiveShooter - Active Shooter
- ☑ US GasLeaks - Gas Leaks
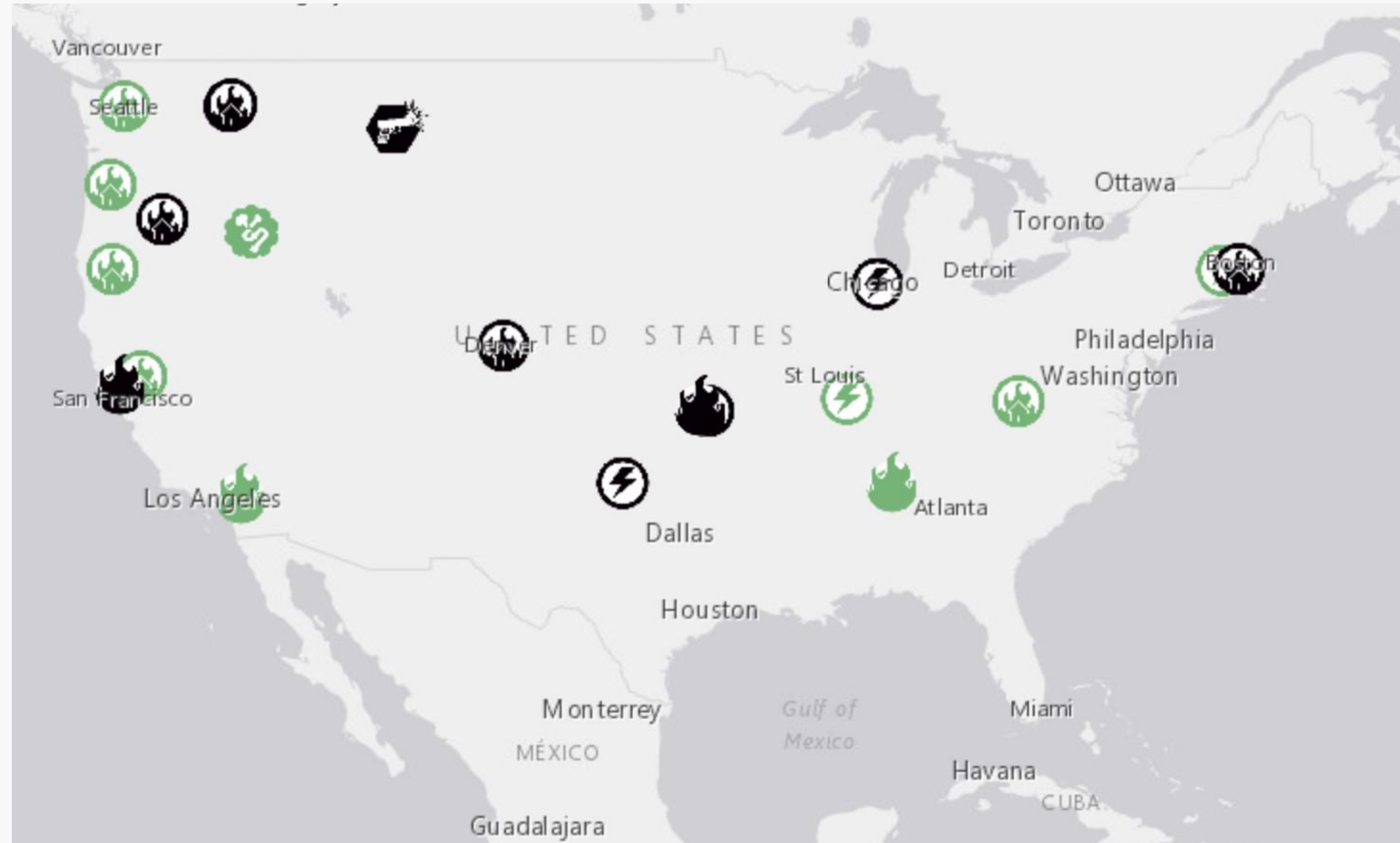
EVENT NOTIFICATION IN DETROIT

WWJ950
@WWJ950 ☹ ▾
🔫 94%

#BreakingNews Police Respond To Possible Active Shooter Situation In Huron Township
https://t.co/qvjxgEoKAV

Jun 20

DPSCommunityDistrict
@Detroitk12 ☹ ▾

Due to a power outage at DIA, school will be closed today, Tuesday, June 19 for DIA and Palmer Park students and staff.

Jun 19

ANONYMOUS REPORTING FOR STUDENTS

Step 1: A student sends a Text Message to the anonymous tipping line

Try it here: 313-462-2202

ANONYMOUS REPORTING WORKLOW

Step 2: DataCapable automatically parses message for location and maps.
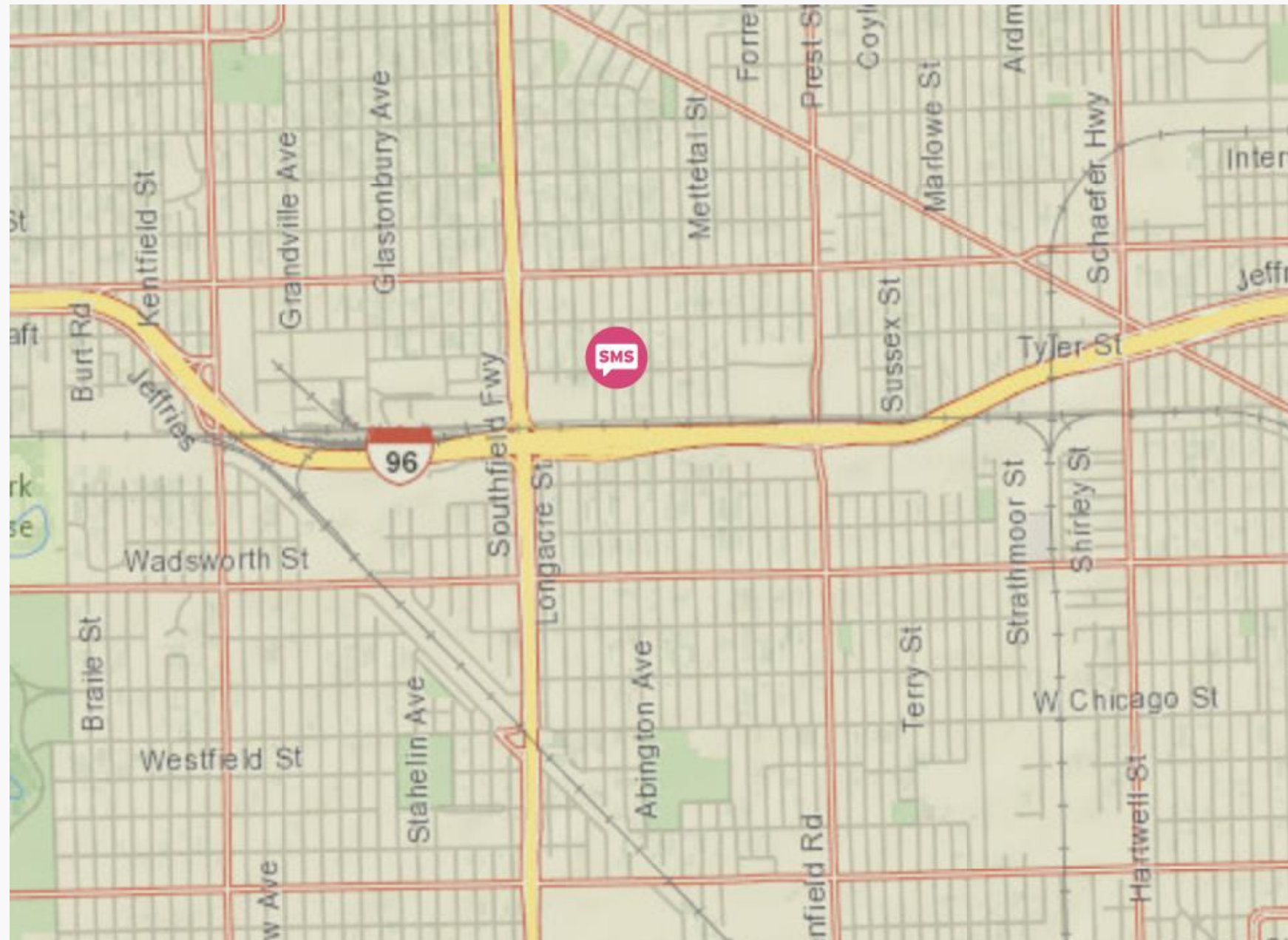
ANONYMOUS REPORTING

Step 3: Student resource officer receives the notification of the student report.

Note: This can come in the form of an email, text, or system integration.

info@datacapable.com   8:30 AM (4 hours ago)

to me

You have received 1 SMS messages in the past 15 minutes in the account with group name Detroit Public Schools.

Date	Number	Message	Region(s)	Location
8:29 AM EDT	SMS +12076643733 ☺	Gang fight today Academy of the Americas High School Detroit MI	N/A	Derived: 2635 Howard St, Detroit, MI 48216, USA

ANONYMOUS REPORTING

Step 3: Student resource officer can review the data and request additional information.

Gang fight today Academy of the Americas High School Detroit MI

MON, AUG 27 08:29 AM

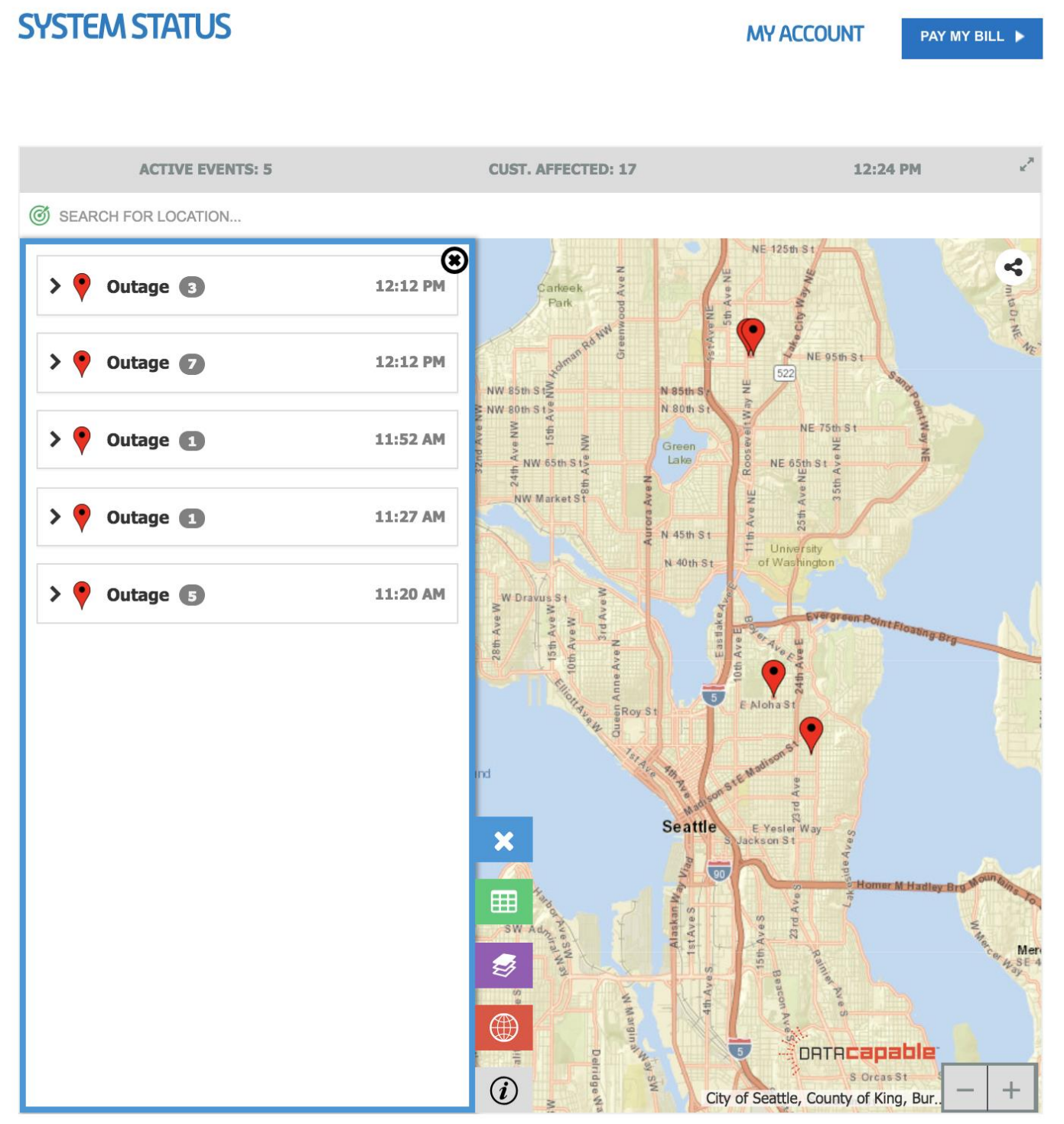38/160 characters

Can you please provide additional data

Send
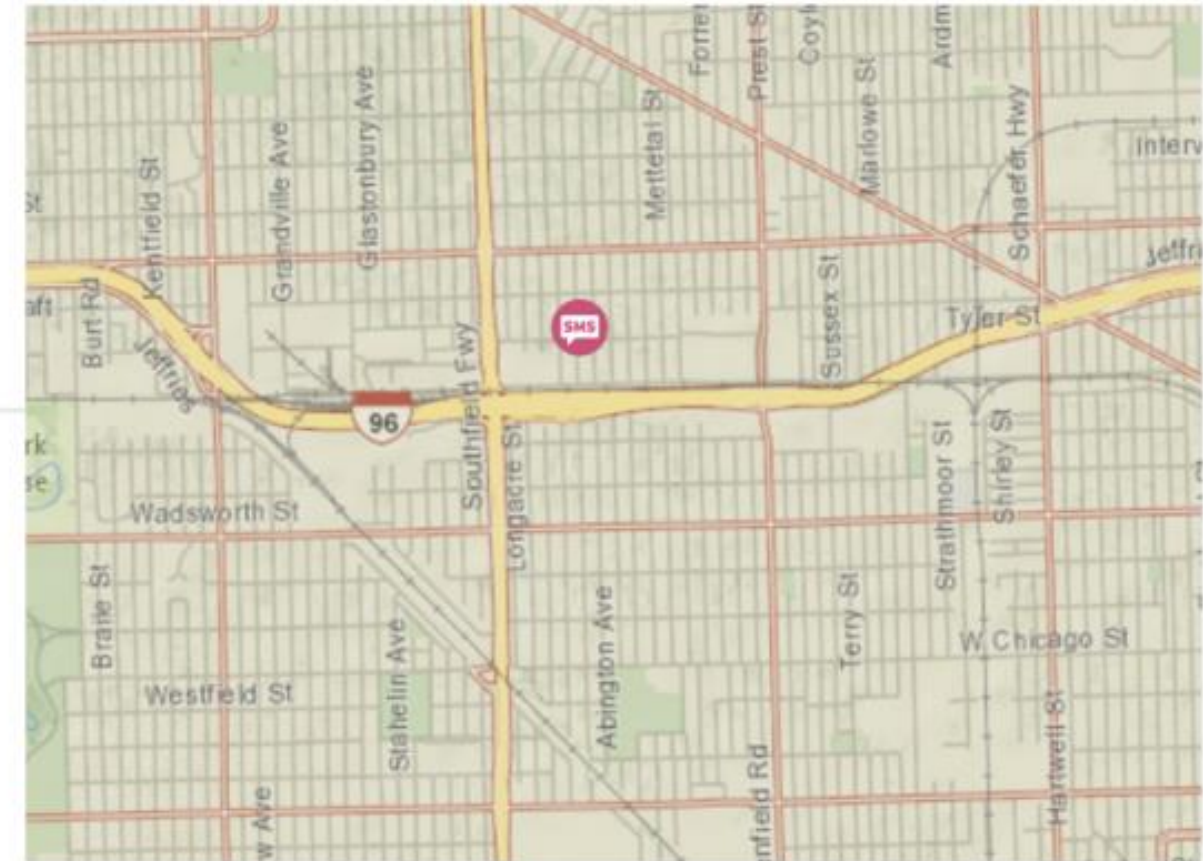
ANONYMOUS REPORTING WORKFLOW

Step 4: Student resource officer can share report with police department
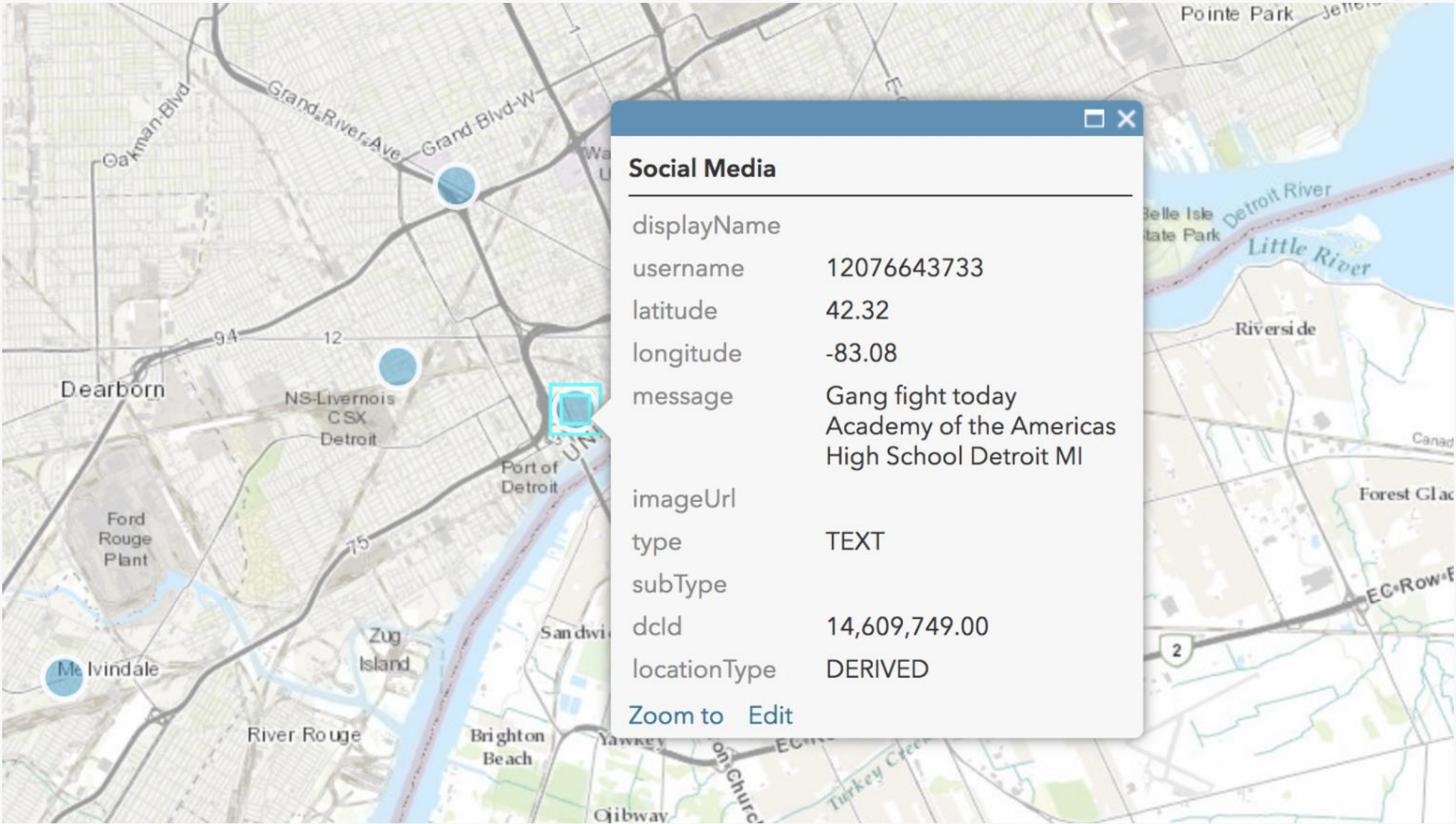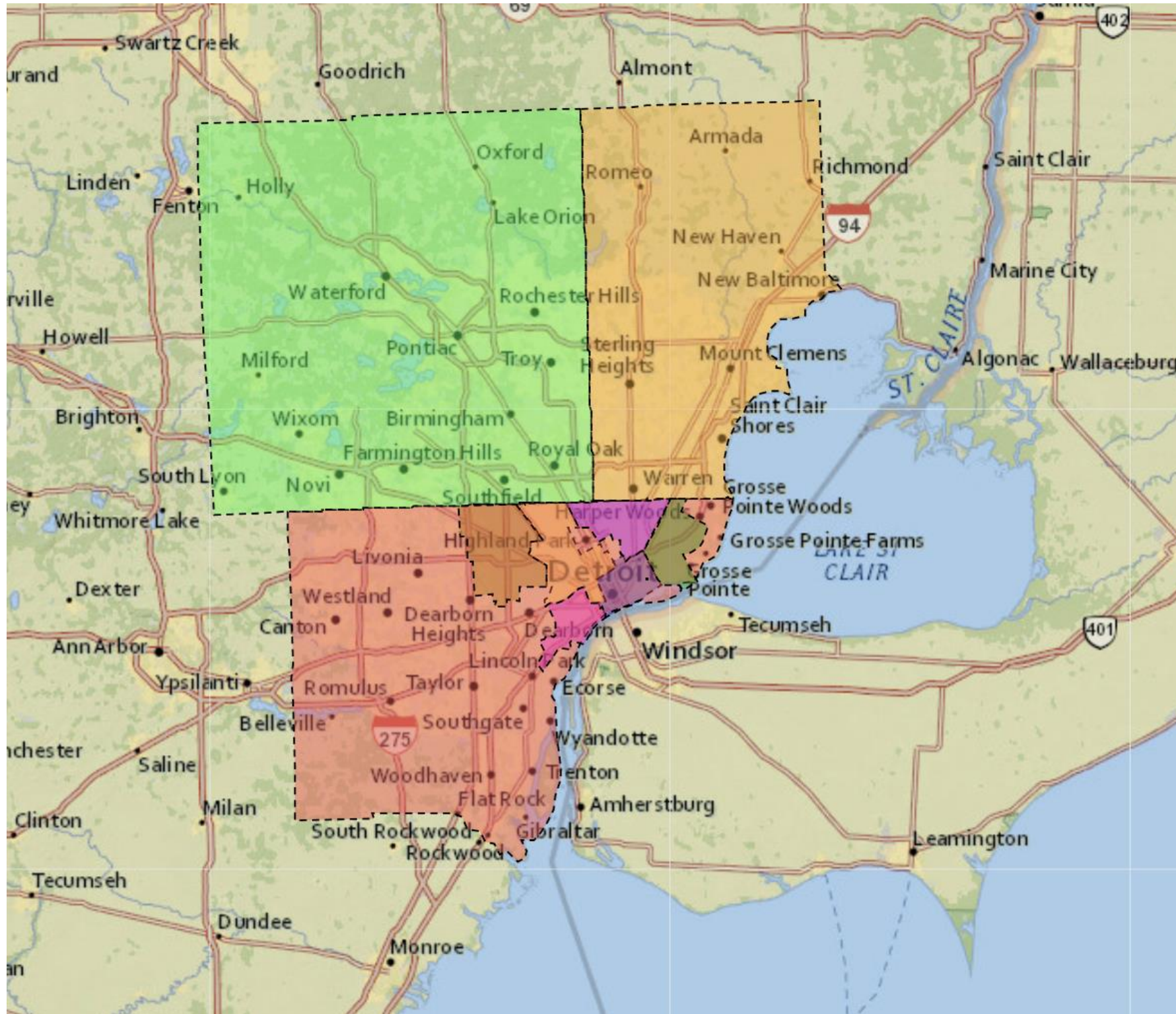
EVENT MAPPING FOR CITIES AND SCHOOLS

Seattle City Light is now ranked 2nd highest by JD Powers in the West region for customer satisfaction

EVENT MAPPING FOR CITIES AND SCHOOLS

Keep parents and the community engaged and updated on the school website and social media when events occur

# School District Boundary/County Boundaries for Geofencing

School District Boundaries or County Bounary files can be used to create Geofenced areas for social media listening activities.

School District Building Floor Plans need to be Georeferenced

Building Floor plans need to be georefenced and loaded in the ArcGIS

This makes it possible to have complete situational awareness of school facilities for all first responders through online GIS services.
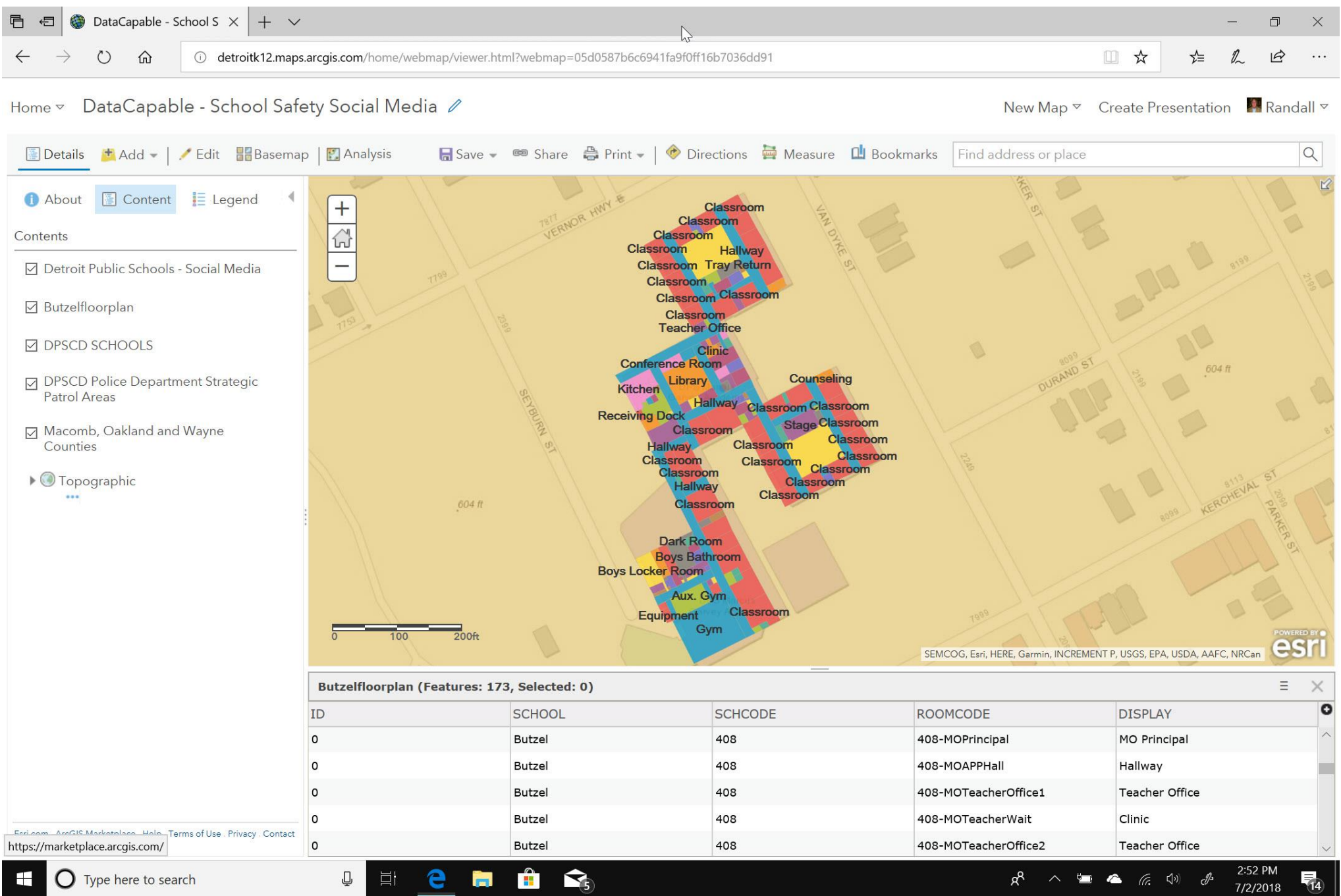
Building Floor Plans

The geodatabase of these building models needs to include attributes that students would recognize; room number, possibly the teacher assigned to the room, other names of the room(cafeteria vs. lunch room vs. cafe).

School Facilities Building Floor Plans

Lessons Learned:

- **Each school should have a building model developed in GIS.**
- **These building models should be available to emergency responders and/or development teams supporting these parties.**
- **The floor plans can be developed by the school districts through educational activities making use of the FREE ArcGIS software available to all schools –**
  http://esri.com/schools

The ConnectED Initiative and ESRI

https://www.esri.com/en-us/industries/education/schools/our-story


Jack Dangermond, ESRI, CEO

Create CTE Students to help with Infrastructure Mapping Needs

CTE students/classes can assist with the creation of any needed school district infrastructure mapping needs by taking advantage of **Esri's offer of software to schools and clubs** for instructional use. The DataCapable School Safety Team is available to assist with the development of this career development pathway for your students.To see if your school might already have software, check out Map#1 of **Esri's USK12GIS Story Map**.
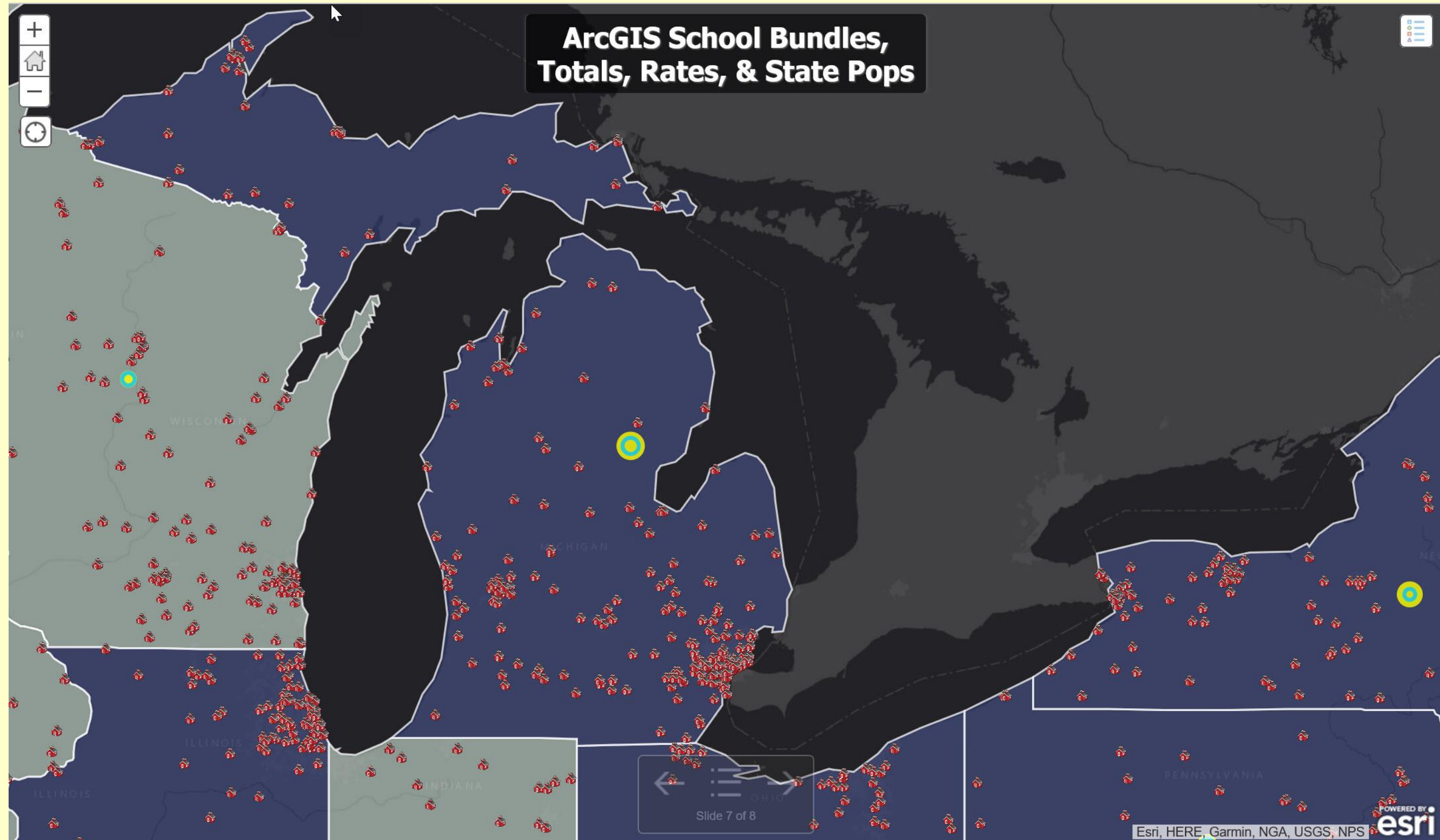
CTE classes might also be interested in these tools:
- **Drone2Map**
- **City Engine**
- **ArcGIS for AutoCAD**
- **ArcGIS Maps for Microsoft Office**
- **ArcGIS Maps for Adobe Creative Cloud**

Transforming Education in Michigan with ArcGIS and Geospatial Technologies Initiative
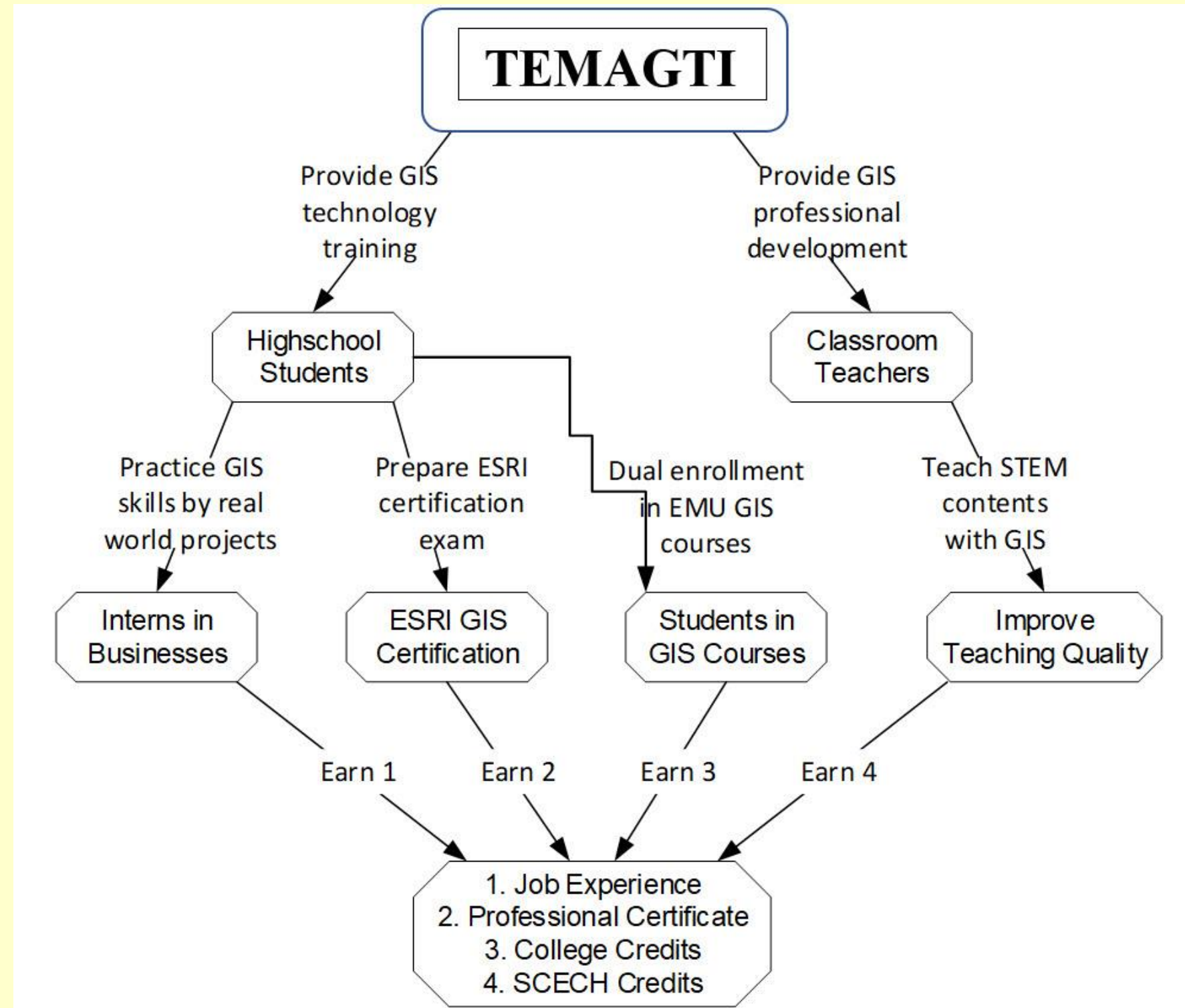
Transforming Education in Michigan with ArcGIS and Geospatial Technologies Initiative
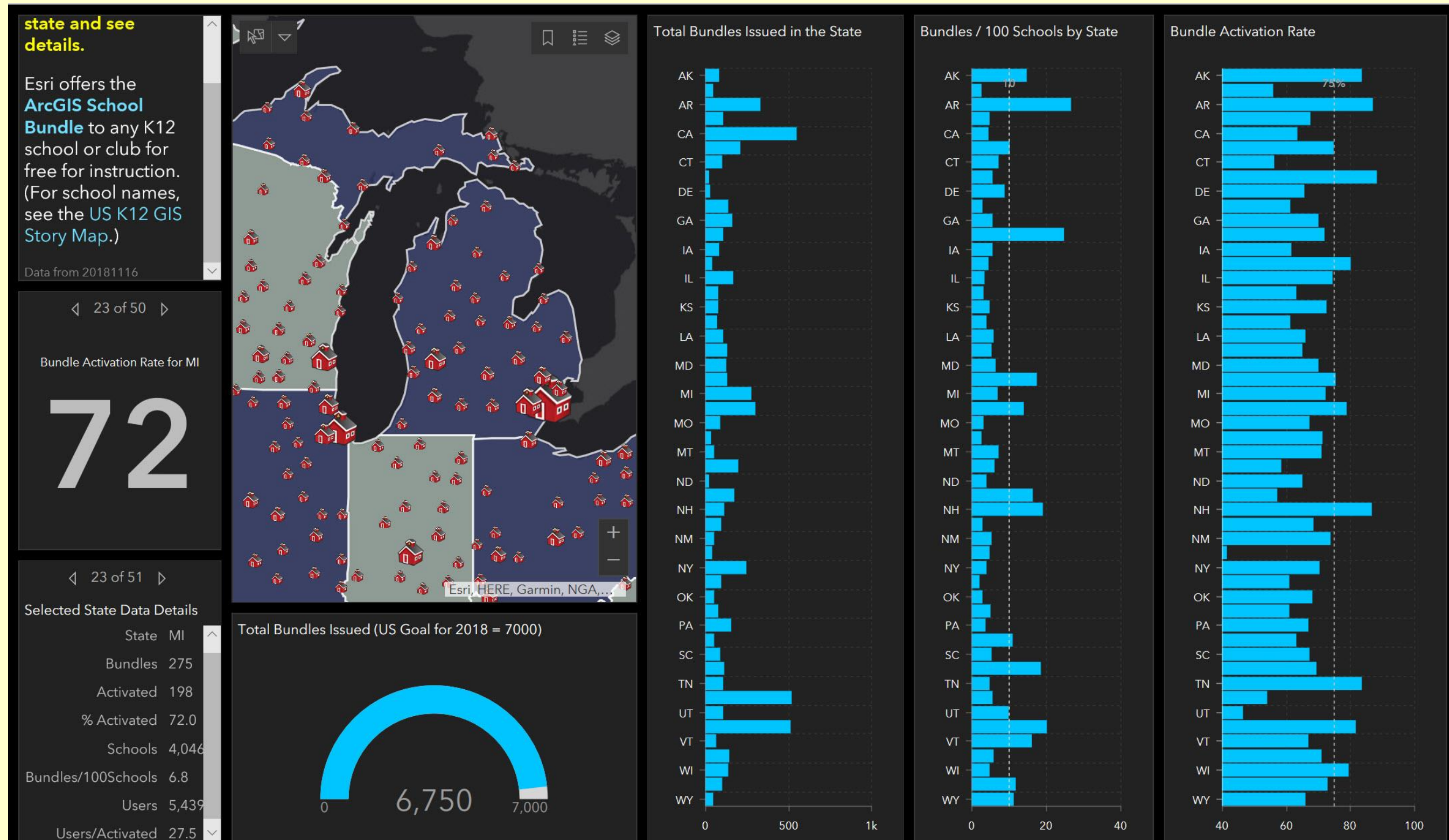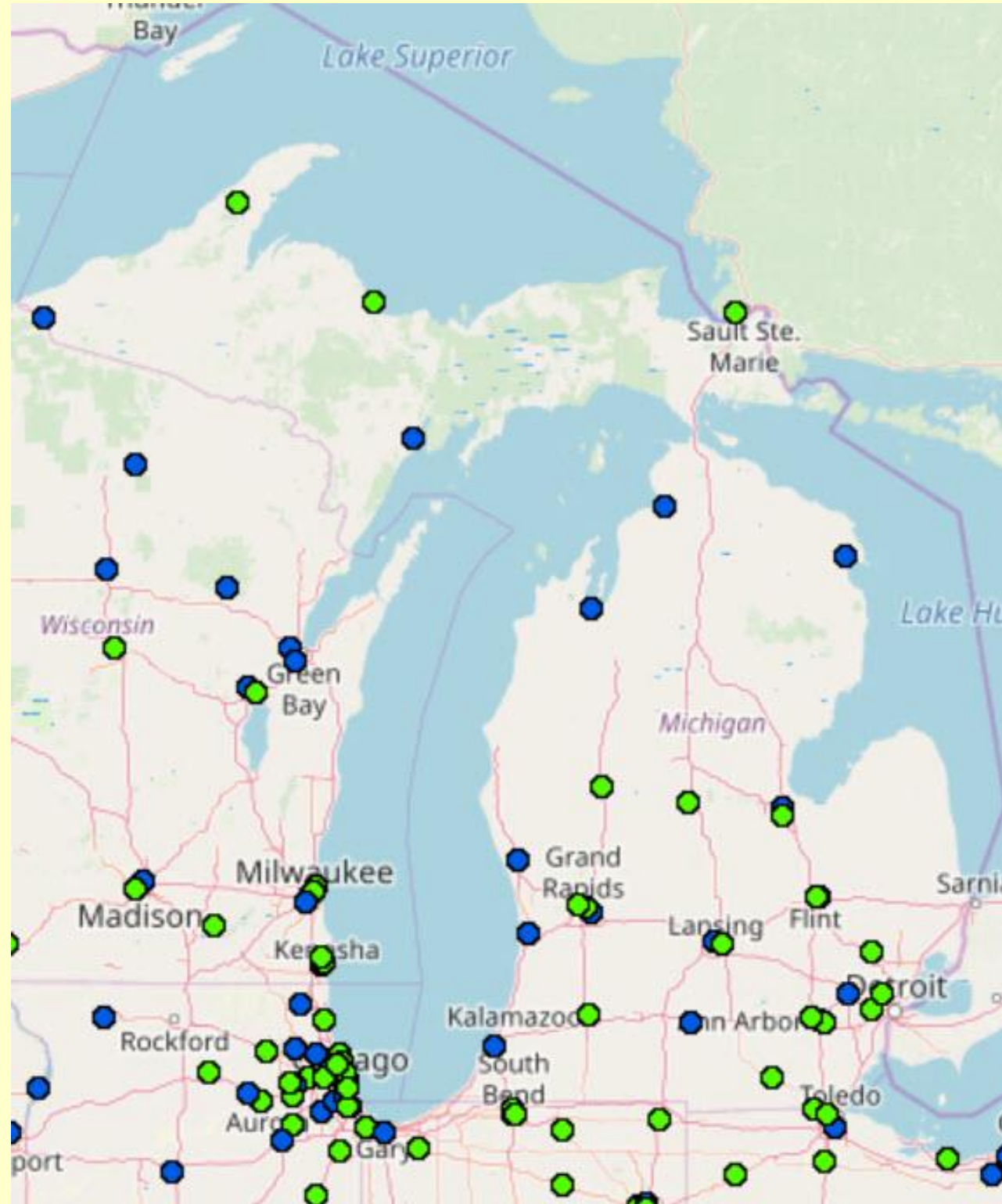
Transforming Education in Michigan with ArcGIS and Geospatial Technologies Initiative

Transforming Education in Michigan with ArcGIS and Geospatial Technologies Initiative

Higher Education GIS and Geospatial Technology Centers

What GIS software tools are freely available to All Michigan Schools?

ArcGIS Online for Organizations Account (AGOO)
- What is AGOO?
- How do you use it?

What GIS software tools are freely available to All Michigan Schools?

ArcGIS Pro Software and all extensions
- What is ArcGIS Pro?
- How do you use it?

What training is available to "jump start" GeoCollaboration and learning?

http://esri.com/training

What training is available to "jump start" GeoCollaboration and learning?

http://esri.com/geoinquiries

Examples of High School Students Community Based Geospatial Projects

Keweenaw National Historical Park and Heritage Sites – Yvonne O. – CLK Schools
http://detroitk12.maps.arcgis.com/apps/MapSeries/index.html?appid=f23b7ebdf63d494588cb65f116141e25

Project SISU Welcome to the Beautiful Keweenaw – Kailyn D. – CLK Schools
http://detroitk12.maps.arcgis.com/apps/MapTour/index.html?appid=15abc3c5b5f748df8ebf9f5da398916a

Walkability in Laurium and Calumet: A Student's Presepective – Multiple Students – CLK Schools
https://www.arcgis.com/apps/MapJournal/index.html?appid=e822fa29c3a54bd9a94dc8c4362783c7

Zach's Internship – River Raisin National Battlefield – Zach T. – Monroe Public Schools
http://mhs-cad.maps.arcgis.com/apps/MapJournal/index.html?appid=be358aaa9e55422f81988d0987b85f9d

MEDIA

School Safety Initiative at the annual Esri User Conference 2018

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